MINUTES OF 67th MEETING OF TECHNICAL ADVISORY COMMITTEE OF NATIONAL INSTITUTE OF HYDROLOGY HELD ON JULY 15, 2014 AT NEW DELHI

The 67th meeting of the Technical Advisory Committee (TAC) of the National Institute of Hydrology, Roorkee was held in the Central Water Commission, New Delhi on July 15, 2014. The meeting was chaired by Sh. A.B. Pandya, Chairman, CWC. The list of the participants is given in Appendix -I.

Chairman in his opening remarks welcomed the members and the invitees. He appreciated the works being carried out by NIH, and urged that the Institute should gear up to handle new challenges, such as impact of climate change on water resources. He then requested the Member-Secretary to take up the agenda.

Dr V C Goyal, Member-Secretary, also welcomed the Chairman, members and invitees. He then took up the agenda items.

ITEM NO. 67.2: Confirmation of the Minutes of 66th Meeting of TAC

The Member-Secretary informed that the minutes of the 66th meeting of the TAC, held on July 29, 2013 at New Delhi, was circulated vide letter no. NIH/RCMU/TAC/34/11 dated July 31, 2013. Since no comments were received from the members, the Minutes were confirmed by the TAC.

ITEM NO. 67.3: Action Taken on the Decisions/Recommendations in the Previous Meeting

The Member-Secretary informed that the change of name of the RC-Bhopal is being processed with the GB of NIH. On the issue of initiating few self-supporting short-term courses, he informed that the modalities of initiating such courses are being worked out.

ITEM NO. 67.4: Status of the Work Programme for the Year 2013-2014

The Member-Secretary briefed about the studies carried out by the Institute during the year 2013-2014. He informed that 192 research papers have been published by the Institute and 9 research papers have been accepted for publication during April 2013-March 2014 & April-June 2014. He further informed that 38 training courses/workshops/symposia were organized during this period. Members appreciated the number of publications brought out by the Institute and number of training/workshop/symposium organized by the Institute.

Prof Patra suggested that the study group for studies of applied nature may include officers from academic and field organizations of the concerned region. The Chairman opined that the local line departments and stakeholders should be invited

in the Working Group meetings when the completed internal studies are being presented.

With reference to the study entitled "*Assessment of Environmental flow for Himalayan river"*, Mr N N Rai suggested that the methodology for assessment of environmental flow in rivers should be standardized, and offered to provide the methodology adopted by CWC for such studies for various basins in north-eastern region. The Chairman suggested that if available in public domain, the approach adopted by CWC in the Kishanganga project should also be looked into. He stressed that the required field data in the habitat modeling studies should be used from the authorized field organizations such as Zoological Survey of India, Botanical Survey of India, CIFRI, etc. CE (HSO) advised to be careful in such assessment for the rivers in the Indus basin as there are international implications.

The following studies completed during 2013-2014 were presented during the meeting:

1. Coastal Groundwater Dynamics and Management in the Saurashtra Region, Gujarat (Dr. Anupma Sharma, Sc. D, NIH).
2. National Program on Isotope Fingerprinting of Waters of India (IWIN) (Dr. M. S. Rao, Sc. D, NIH).
3. Cryospheric system studies and runoff modeling of Ganglass catchment, Leh, ladakh Range (Dr. Renoj J. Thayyan, Sc. D, NIH).
4. Monitoring and Modelling of the Streamflow for the Gangotri Glacier (Dr. Manohar Arora, Sc. D, NIH).
5. Development of Low Cost Media for Fluoride Removal from Drinking Water of Fluoride Affected Areas (Dr. Rajesh Singh, Sc. B, NIH).

During presentation of the study "Coastal Groundwater Dynamics and Management in the Saurashtra Region, Gujarat", Dr Gurunadha Rao enquired about the submarine discharge and presence of limestone cavities in the region. He suggested illustrating the 3D conceptualization in vertical 2D cross-section as well. Dr Pandian enquired on the quantification of change in cropping pattern and the economic returns as a result of project interventions. The Chairman enquired about the bunds and tidal regulators in the study area and the possibility of artificial recharge of deep aquifers, which was replied by Dr Anupma Sharma.

During presentation on the completed study entitled *"Cryospheric system studies and runoff modeling of Ganglass catchment, Leh, Ladakh Range"*, the Chairman remarked that the melting of permafrost might trigger increased movement of sediments in rivers and enhance the vulnerability of landslides in the area. He suggested that permafrost studies are in preliminary stages in our country and need greater focus in future.

ITEM NO. 67.5: Report the Proceedings of the Working Group Meetings

The Member-Secretary briefed about the 39th and 40th meetings of the Working Group of NIH, which were held at NIH, Roorkee, during October 21-22,

2013 and June 4-5, 2014, respectively. During these meetings, the Working Group members reviewed the progress of studies for the year 2013-2014 and also discussed the proposed work programme for the year 2014-2015. He presented the major recommendations of the working group.

TAC noted the proceedings of the Working Group meetings.

ITEM NO. 67.6: Work Programme for the Year 2014-2015

The Member-Secretary briefed about the proposed work programme of the Institute for the year 2014-2015, which was discussed during the 40th Working Group meeting of NIH. Director, NIH, informed that due to some administrative reasons, the RCC meetings for most of the Regional Centres could not take place. However, the proposed work programme of the Regional Centres were placed before the TAC. The TAC suggested that the proposed work programme of these Regional Centres may be considered by the respective RCCs and their recommendation should be placed before the TAC during it s next meeting.

The TAC approved the proposed work programme of the Institute for the year 2014-2015. The list of studies approved by the TAC for the year 2014-2015 is given in Appendix-II.

ITEM NO. 67.7: Reporting Items

1. Details of the consultancy projects carried out by NIH during the year 2013-2014 were noted by the TAC.

2. Details of the international R&D projects submitted/ awarded during the year 2013-2014 were noted by the TAC.

3. Dr V C Goyal, Head, RMO Division, made a presentation on the Project "Development of a DSS for Hydrology and watershed Management in Neeranchal Project", which is to be funded by Dept. of Land Resources (GoI) under a World Bank supported project. The TAC appreciated and approved taking up the sponsored project by the NIH.

The meeting ended with a vote of thanks to the Chair.

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Appendix– I: List of Participants
Appendix– II: Proposed Work Programme for the Year 2014-2015

Appendix-I

LIST OF PARTICIPANTS OF THE 67th TAC MEETING OF NIH

1.	Sh. A.B. Pandya Chairman, CWC New Delhi	In Chair
2.	Sh. Vinay Kumar Chief Engineer (HSO) CWC, New Delhi	Member
3.	Sh. R.D. Singh Director, NIH Roorkee	Member
4.	Sh. K.C. Naik Member (TT&WQ), CGWB, New Delhi	Representing Chairman CGWB
5.	Sh. S.B. Tyagi IMD, New Delhi	Representing DDGM (H) IMD
6.	Prof. K.C. Patra Dept. of Civil Engineering NIT Rourkela-769008, Orissa	Member
7.	Dr. B.J. Pandian Director i/c, Water Technology Centre, Tamil Nadu Agricultural University, Coimbatore - 641003.	Member
8.	Dr V V S Gurunadha Rao Scientist G (Retd.), NGRI, Hyderabad	Member
9.	Dr V C Goyal Scientist F, NIH, Roorkee	Member-Secretary

INVITEES

1. Dr. Rakesh Kumar, Head, SWHD, NIH
2. Er. C P Kumar, Head, HID, NIH
3. Dr. C.K. Jain, Head, EHD, NIH
4. Dr. J.V.Tyagi, SWHD, NIH
5. Dr. M.K. Goel, WRSD, NIH
6. Er. Omkar Singh, RMOD, NIH
7. Dr. M.Someshwar Rao, HID, NIH
8. Dr. Anupama Sharma, GWHD, NIH
9. Dr. Renoj J.Thayyan, WRSD, NIH
10. Dr. Manohar Arora, SWHD, NIH
11. Dr. Rajesh Singh, EHD, NIH
12. Sh. M.Raghuram, Director Hyd. (DSR), CWC
13. Sh. G.L.Bansal, Director, Hyd.(N), CWC
14. Sh. N.N. Rai, Director, Hyd.(NE), CWC

Appendix-II

APPROVED WORK PROGRAMME FOR THE YEAR 2014-2015

ENVIRONMENTAL HYDROLOGY DIVISION
2014-2015

S.No.	Study	Study Team	Duration
	Internal Studies		
1.	Water Quality Modelling using Soft Computing Techniques (Najafgarh, Mehrauli, City and Shahadara Blocks of NCR Delhi)	Rama Mehta (PI) C. K. Jain Anju Cjoudhary	2 Years (04/14-03/16)
2.	Environmental Flow Assessment of Hemavathi River in Karnataka	D. G. Durbude (PI) C. K. Jain	2 Years (04/13-03/15)
3.	Himalayan River Water Quality Assessment in a Stretch from Gangotri to Haridwar	Rajesh Singh (PI) C. K. Jain D. G. Durbude M. K. Sharma S. P. Rai Renoj J. Thayyan J. P. Patra	3 Years (06/14-03/17)
	Sponsored Projects		
1.	Ionic Enrichment Dynamics of Glacial Sediment and Melt water of Gangotri Glacier	M. K. Sharma (PI) C. K. Jain Renoj Thayyan Manohar Arora Naresh Saini Jatin Malhotra Rakesh Goyal	3 Years (04/14-03/17) DST Sponsored.
2.	Low Cost Technology for Purification of Arsenic and Microbes Contaminated Water using Nanotechnology	Vijaya Aggarwala, IITR (PI) Rama Mehta, NIH (Co-PI)	2 Years (04/14-03/16) DST Sponsored.

GROUND WATER HYDROLOGY DIVISION
2014-15

S. No. & Reference Code	Project	Project Team	Duration & Status	Funding Source
1. NIH/GWD/ NIH/13-14	Estimation of specific yield and storage coefficient of aquifers	Surjeet Singh (PI) N.C. Ghosh (Co-PI) Sumant Kumar	1 year (04/13 – 10/14) **Status**: Continuing, & extended for six months.	NIH
Sponsored Studies				
2. EU-sponsored Project no. 282911	Saph Pani - Enhancement of natural water systems and treatment methods for safe and sustainable water supply in India"	Project Coordinator & P.I. : N. C. Ghosh Other Team Members V. C. Goyal, C. K. Jain, Sudhir Kumar, B. Chakravorty, A. K. Lohani Anupma Sharma, Surjeet Singh, Sumant Kumar Shashi Poonam Indwar	36 months (Oct., 2011-Sept.,2014) **Status:** Continuing & expected to be completed by 30th September, 2014.	European Union under 7th - Framework Programme
3. NIH/GWD/ NIH/11-14	Management of Aquifer Recharge (MAR) and Aquifer Storage Recovery (ASR)	Sumant Kumar (PI) Rajan Vatsa, N.C. Ghosh, C.P. Kumar, Surjeet Singh, Sanjay Mittal	3 years (04/11 – 03/15) **Status:** Second phase will Continue	Saph Pani Project, after Sept., 2014 NIH's internal funding.
4. EU-sponsored Project no. 282911	Flow and Contaminant Transport Modeling of Riverbank Filtration	Shashi Poonam Indwar (PI), N.C. Ghosh, Anupma Sharma, Rajan Vatsa, Sanjay Mittal	2 ½ years (04/12 – 09/14) **Status:** Continuing	Saph Pani Project, after Sept., 2014 NIH's internal funding.

HYDROLOGICL INVESTIGATION DIVISION
2014-2015

S.No.	Study	Team	Duration / Status
INTERNAL STUDIES			
1	Water Quality, Hydrogeology and Isotopic Investigations in SW Punjab	M. S. Rao (PI) C. P. Kumar Gopal Krishan	3 years (07/12-06/15) Continuing Study
2	Water Availability Studies for Sukhna Lake, Chandigarh	S. D. Khobragade (PI) C. P. Kumar Sudhir Kumar A. R. Senthil Kumar P. K. Garg V. K. Agarwal	2 years (04/13-03/15) Continuing Study
3	Isotope Studies for the Identification of Different Aquifer Groups and their Dynamics in Upper Yamuna River Plains	Sudhir Kumar (PI) C. K. Jain S. P. Rai S. D. Khobragade P. K. Garg B. C. Joshi (CGWB) Tejdeep Singh (CGWB)	2 years (07/13-06/15) Continuing Study
4	Estimation of Radon Concentration in Waters and Identification of Paleo-groundwater in Part of Punjab Located in Satluj River Basin using Isotopes	S. K. Verma (PI) S. P. Rai (Co-PI) M. S. Rao C. P. Kumar Mohar Singh	2 years (10/13-09/15) Continuing Study
5	Sub-marine Groundwater Discharge and Sea-water Intrusion in Coastal Aquifers of East Coast, India	M. S. Rao (PI)	2 years (06/14-05/16) New Study
6	Monitoring Isotopes in Air Moisture in Parts of Himalayas (Himachal Pradesh & Uttarakhand) for investigating the Cloud Condensation	M. S. Rao (PI) C. P. Kumar Gopal Krishan	2 years (06/14-05/16) New Study
SPONSORED PROJECTS			
7	The Structure and Dynamics of Groundwater Systems in Northwestern India under Past, Present and Future Climates	S. P. Rai (PI) M. S. Rao Surjeet Singh S. K. Verma C. P. Kumar Sudhir Kumar V. K. Agarwal Rajeev Gupta S. L. Srivastava Vishal Gupta Mohar Singh	3 years (06/12-05/15) Continuing Study

S.No.	Study	Team	Duration / Status
8	The Use of Environmental Isotopes to Assess Sustainability of Intensively Exploited Aquifer Systems in North Eastern Parts of Punjab, India	M. S. Rao (PI) C. P. Kumar S. P. Rai	3 years (09/12-08/15) Continuing Study
9	Assessment of Baseflow and its Impact on Water Quality in the Part of Satluj River in India using Environmental Isotopes and Age Dating Techniques	S. P. Rai (PI) R. V. Kale M. S. Rao C. P. Kumar Sudhir Kumar V. K. Agarwal Vishal Gupta Mohar Singh	3 years (10/12-09/15) Continuing Study
10	Review of Groundwater Resources in the Indo-Gangetic Basin: A Case Study on Resilience of Groundwater in the Punjab to Withdrawal and Environmental Change	M. S. Rao (PI) C. P. Kumar Gopal Krishan	One year 8 months (02/13-09/14) Continuing Study
11	Integration of Isotope Hydrology in Aquifer Mapping Efforts in India: A Pilot Study of Upper Yamuna Plains	Sudhir Kumar (PI) S. P. Rai S. D. Khobragade C. K. Jain P. K. Garg	2 years (05/13-04/15) Continuing Study

SURFACE WATER HYDROLOGY DIVISION
2014-2015

S. No. & Ref. Code	Title	Study Team	Duration
Internal Studies			
1. NIH/SWD/NIH/12-15	Sedimentation Studies for Pong Reservoir, Himachal Pradesh	A. R. Senthil kumar Manohar Arora Suhas D Khobragade Avinash Agarwal Sanjay Jain	3 years (April 2012 to March 2015)
2. NIH/SWD/NIH/12-15	Study Of Hydro-Meteorological Droughts For Chitrakoot Bundelkhand Region In India	R.P. Pandey	3 years (April 2012 to March 2015)
3. NIH/SWD/NIH/13-16	Quantitative assessment of uncertainties in river discharge estimation	Sanjay Kumar Sharad Jain	3 Years (April 2013 to March 2016)
4. NIH/SWD/NIH/13-16	Evaluation and modeling of hydrological support system for watersheds of Garhwal, Uttarakhand hills.	Avinash Agarwal Manohar Arora RK Nema	3 Years (November 2013 to October 2016)
5. NIH/SWD/NIH/14-15	Estimation of Water Balance for Integrated Water Resources Management in Yerrakalva Pilot Basin, A.P.	J.V.Tyagi YRS Rao,	1 year (April 2014 to March 2015)
6. NIH/SWD/NIH/14-15	Status Report on "Impact of Anthropogenic and Climate Change on Sediment Load of Rivers"	Archana Sarkar	1 year (April 2014 to March 2015)
7. NIH/SWD/NIH/14-16	Study of Rainfall Patterns and Comparison of Rainfall Data from different Sources for Uttarakhand State	Archana Sarkar N.K. Bhatnagar Vaibhav Garg (IIRS) Rakesh Kumar	2 years (April 2014 to March 2016)
8. NIH/SWD/NIH/14-17	Monitoring and modelling of streamflow for the Gangotri Glacier	Manohar Arora Rakesh Kumar	3years (May 2014 to March 2017)
9. NIH/SWD/NIH/14-17	Effect of climate change on evaporation at point scale	Digambar Singh A. R. Senthil kumar Manohar Arora	3years (June 2014 to March 2017)
10. NIH/SWD/NIH/14-17	Hydrological Modelling of Brahmani Baitarani River Basin using eWater Source Platform	J.P.Patra Rakesh Kumar Pankaj Mani	3years (April 2014 to March 2017)
11. NIH/SWD/NIH/13-15	Application of DSS(P) for Integrated Water Resources Development and Management	A.K. Lohani Surjeet Singh Rahul Jaiswal	2 year (April 13-March 15)

WATER RESOURCES SYSTEM DIVISION
2014-2015

S. N.	Title	Study Team	Duration	Funding (Rs. Lakh)
Ongoing Internal Studies				
1.	Trend and variability analysis of rainfall and temperature in Himalayan region	L. N. Thakural Sanjay Kumar Sanjay K. Jain Sharad K. Jain Tanvear Ahmed	3 years (10/11-09/14)	NIH
2.	NIH_Basin – A WINDOWS based model for water resources assessment in a river basin	M. K. Goel Sharad K. Jain Deepa Chalisgaonkar Prabhash K. Mishra	2 Years (04/13-03/15)	NIH
3.	Web GIS based snow cover information system for the Indus Basin	D. S. Rathore Deepa Chalisgaonkar L. N. Thakural Tanvear Ahmed	2 Years (04/13-03/15)	NIH
4.	Assessment of Water Footprint of the National Capital Territory (NCT) of India	Deepa Chalisgaonkar Sharad K. Jain M. K. Nema P. K. Mishra	2 Years (04/13-03/15)	NIH
5.	Impact of Climate and Land Use Change on Floods of Various Return Periods	P. K. Bhunya Sanjay Kumar D S Rathore	2 Years (04/13-03/15)	NIH
6.	Assessing climate change impact across KBK region of Odisha	P. K. Mishra Sharad K. Jain Sanjay K. Jain P. K. Bhunya	2 Years (04/13-03/15)	NIH
7.	Glacier change and glacier runoff variation in the upper Satluj river basin	Sanjay K. Jain Sharad K. Jain Renoj J. Theyyan	2.5 Years (10/13-03/16)	NIH
8.	Variability of the Hydro-climatic variables in Punjab Plains of lower Satluj	M. K. Nema Sharad K. Jain	2 Years (11/13-10/15)	NIH (11.34)
Sponsored Studies				
1.	Glaciological studies of Phuche Glacier, Ladakh Range, India	Renoj J. Theyyan M K Goel S P Rai	5 Years 1/10-12/14	DST (56.00)
2.	Ganga River Basin Environment Management Plan	Sharad K Jain N. C. Ghosh Sanjay K. Jain M. K. Goel	2 Years 07/12-06/14	IIT Kanpur (12.00)
3.	Assessment of Environmental flow for Himalayan River	Sharad K. Jain Pradeep Kumar P. K. Agarwal P. K. Mishra	1 Year 07/14-07/15	MOES (9.95) (Funds are expected shortly)
New Internal Studies				
1.	Hydrologic Modelling of a part of Satluj Basin using SWAT Model	P. K. Agarwal Sharad K. Jain M. K. Goel	2 -3/4 Years (06/14-	NIH (23.00)

		Sanjay K. Jain MK Nema Tanvear Ahmed	3/17)	
2.	Decision Support System for Water Resources Planning in Upper Bhima basin, Maharashtra	D. S. Rathore M. K. Goel, R.P. Pandey Sanjay Kumar Surjeet Singh	2 years (07/14-06/16)	NIH (34.00)
3.	Catchment scale evaluation of cold-arid cryospheric system Hydrology, Ganglass catchment, Ladakh	Renoj J. Theyyan S P Rai	3 years (04/14-03/17)	NIH (20.00)

RESEARCH MANAGEMENT AND OUTREACH DIVISION
2014-2015

S.No.	Study	Team	Duration
		Internal Studies	
1.	Participatory development of structure for IWRM Framework in identified sub-basins under Pilot Basin Studies (PBS) program **(New Study)**	V C Goyal (PI) Omkar Singh R V Kale	DOS: July 2014 DOC: June 2015
2.	Water Conservation and Management in Ibrahimpur Masahi Village of Haridwar District (Uttarakhand) **(Ongoing Study)**	Omkar Singh (PI), V.C. Goyal, C.K. Jain, J.V. Tyagi and Sanjay Kr. Jain **Scientific/Technical Staff** Subhash Kichlu, Yatvir Singh, Rajesh Agarwal, Rakesh Goyal, N.K. Lakhera and C.S. Chowhan	DOS: Apr 2013 DOC: Mar 2015
		Sponsored Studies	
3.	Customization of WEAP model for application in Ur river watershed in Tikamgarh district of Bundelkhand region. **(Under TIFAC Project) (New Study)**	R V Kale (PI) T Thomas- RC Bhopal Jyoti Patil Rajesh Agarwal	DOS: Apr 2014 DOC: Sep 2015

Sponsored Projects

1. Integrating hydrology, climate change and IWRM with livelihood issues: Development of methodology and a DSS for water-scarce Bundelkhand region in India, **Funded by TIFAC, Government of India under INDIA-IIASA Programme of TIFAC**
   Period: Aug 2013-Dec 2016 (30 months) Budget: Rs 56.64 lakh

   Team from NIH:
   V C Goyal (PI), T Thomas (Co-PI), R V Kale (Co-PI)
   Nodal Coordinators from other partners:
   Dr (Mrs) K Vijaya Lakshmi, DA, New Delhi
   Dr Sandeep Goyal, MAPCOST, Govt. of MP (India)
   International Collaborators: IIASA, Austria

2. Development of a DSS for Hydrology and Watershed Management in Neeranchal Project, **To be funded by Dept. of Land Resources (GoI) under a World Bank supported project**
   Period: Jun/Jul 2014-May 2019 Budget: Rs 30 Crore approx.
   Partners: NIH; IIT Delhi; WTC Delhi; NRSC Hyderabad

REGIONAL CENTRE, BELGAUM
2014-2015*

S N	Title of the Study	PI	Duration
1	Effectiveness of Storage Tanks for Groundwater Recharging in North Karnataka Region	M. K. Jose	2 years (August 2012 to July 2014) On Going
2	Effect of Sand Mining on River and Groundwater Regime in Hard Rock Areas: A Case Study from Andhra Pradesh	M. K. Jose	2 years (August 2012 to July 2014) On Going
3	Waterlogging and Salinity Studies in NagarjunaSagar Right Bank Canal Command	N. Varadarajan	2 years (August 2012 to July 2014) On Going
4	Integrated Water Resources Management (IWRM) on a Pilot Basin – Zuari River Basin, Goa	T. Chandramohan	3 years (April 2013 to March 2016) On Going
5	Comparative Analysis of Various Rainfall-Runoff Models for Rivers of Western Ghats	B. Venkatesh	3 years (April 2013 to March 2016) On Going
6	Application of Isotopes for Estimation of Groundwater Recharge under Different Land Covers/ Land Uses in Sindhudurg District, Maharashtra	B. K. Purandara	2 years (April 2013 to March 2015) On Going
7	Dam Break Analysis of Sharavathi and Varahi river basins	B. Venkatesh	9 months On Going
8	Development of DSS(P) Application for conjunctive use of surface and groundwater in Tungabhadra Command	B. Venkatesh	3 years (August 2013 to July 2016) On Going

*To be considered by the RCC

REGIONAL CENTRE, JAMMU
2014-2015*

S. N.	Study	Team	Duration	Funding / Remarks
1	Impact of land use changes on flow regime and sustenance of environmental flows of Tawi river at Jammu	Pradeep Kumar M. K. Nema	Nov 2011 to Oct 2014 (03 Years)	NIH
2.	Climate Change Effects on Hydrology of the Tawi Basin in Western Himalaya	M. K. Nema Pradeep Kumar	Nov 2011 to Oct 2014 (03 Years)	NIH
3.	PBS: Integrated Water Resources Management (IWRM) Study in Tawi River Basin, JK	Pradeep Kumar M. K. Nema	Apr 2012 to Mar 2017 (05 Years)	NIH
4.	Automation of Hydro-Meteorological Network in Jhelum Basin for Flood Forecasting	Pradeep Kumar R. J. Thayyen M. K. Goel Sharad K. Jain	Sep 2013 to Mar 2016 (02 Years 07 Months)	NIH

*To be considered by the RCC

REGIONAL CENTRE, BHOPAL
2014-2015

S. N.	Study	Duration	Starting and ending date	Status/ Study Group
1.	Surface and ground water modeling for conjunctive use (Pilot Basin Studies: IWRM in Bina River Basin in Bundelkhand Region in M.P.)	5 Years	April 2012 to March 2017	T. R. Nayak T. Thomas Ravi Galkate R.K. Jaiswal
2.	Applications of Decision Support System (DSS) in Shipra river basin of MP	3 Years	June 2013 to May 2016	Ravi Galkate T. R. Nayak R.K. Jaiswal T. Thomas
3.	Integrating hydrology, climate change and IWRM with livelihood issues: Development of methodology and a DSS for water-scarce Bundelkhand region in India	2½ Years	May 2013 to October 2015	V. C. Goyal T. Thomas R. V. Kale S. Goyal K. Vijay-lakshmi
4.	Integrated Assessment of Drought Vulnerability for Water Resources Management in Bina basin	2 Years	July 2014 to June 2016	T. Thomas T. R. Nayak R.K. Jaiswal Ravi Galkate
5.	Irrigation Planning and Management in the Harsi project Command of a Water Resource Project	2 Years	May 2013 to April 2015	R.K. Jaiswal T. Thomas Ravi Galkate T. R. Nayak

REGIONAL CENTRE, KAKINADA
2014–2015*

S. N.	Study	Team	Duration	Status/Funding
1	Surface water and Ground water interaction study in the Y drain of lower Yerrakalva basin as part of pilot basin studies for IWRM	S.V.Vijayakumar (P.I.) Y.R.Satyaji Rao R.Venkata Ramana B. Krishna	April 2014 to March 2015	New/Internal (Basin Suggested by Govt., of A.P)
2	Water availability: IWRM studies in the Yerrakalva River Basin, Andhra Pradesh	Y.R. Satyaji Rao (PI) B.V.Ramana	April 2014 to March 2015	New/Internal (Basin Suggested by Govt., of A.P)
3	Runoff estimation of Tammileru ungauged basin Andhra Pradesh using SWAT model	V.S. Jeyakanthan (P.I.) J.V.Tyagi R.Venkata Ramana	May 2013 to March 2015	Continuing from previous year/Internal
4	Assessment of climate change impact on hydrology of Mahanadhi basin	P.C.Nayak (P.I.) Y.R.Satyaji Rao B. Venkatesh T. Thomas	April 2013 to March 2015	Continuing from previous year /Internal

S. N.	Study	Team	Duration	Status/Funding
5	Hydrological modeling of time series data Analysis of high frequency Ground water levels data in the Coastal aquifers of A.P	B.Krishna (P.I.) Y.R.Satyaji Rao R.Venkata Ramana	May 2013 to March 2015	Continuing from previous year /Internal
6	Evaluation of urban storm water network in Hyderabad using SWMM	R.Venkata Ramana (P.I.) Y.R.Satyaji Rao S.V.Vijayakumar V.S. Jeyakanthan	May 2013 to March 2016	Continuing from previous year /Internal
7	Identification of submarine discharge zones and sea water intrusion modeling in Godavari Delta using integrated approach	Y.R. Satyaji Rao (PI) M.S.Rao B.V.Ramana	July 2014 to March 2017	New/ Internal (in collaboration with NIO, NGRI)

*To be considered by the RCC

CFMS, GUWAHATI
2014-2015*

Study No.	Title of the study	Study Team	Duration
Continuing Studies			
NIH/CFMS-G/13-15/	Risk Assessment of Heavy Metal Pollution in Surface Soils of Kulsi River Basin (Assam / Meghalaya)	C. K. Jain S. K. Sharma G. Tirkey B. Sharma	07/13-03/15 (On Going)
NIH/CFMS-G/13-15/	Short Term Flood Forecasting Using Bootstrap based Artificial Neural Networks within Kulsi River Basin (Assam / Meghalaya)	S. K. Sharma G. Tirkey C. K. Jain	07/13 - 03/15 (On Going)
NIH/CFMS-G/13-15/	Application of the Arc – SWAT model for the prediction of runoff within Kulsi River Basin (Assam/Meghalaya)	G. Tirkey S. K. Sharma C. K. Jain	07/13 - 03/15 (On Going)
New Proposed Studies			
NIH/CFMS-G/14-16/	Estimation of Runoff for Kulsi River Basin using SCS Curve Number and Geographic Information System (GIS)	S. K. Sharma G. Tirkey C. K. Jain	07/14-03/16 (New Study)
NIH/CFMS-G/14-16/	Application of USLE model for estimation of soil loss in Kulsi River Basin using remote sensing and geographic information system	G. Tirkey S. K. Sharma C. K. Jain	07/14 - 03/16 (New Study)

*To be considered by the RCC

CFMS, PATNA
2014-2015*

S. N.	Title of the study	Study Team	Duration	Funding
1.	Pilot Basin Studies (PBS) for Mahi River Basin in Ghaghra-Gandak Composite Basin	CFMS, Patna	April 2012-March 2017 (XII Plan Year)	NIH
2.	Development of flood forecasting system based on rainfall information obtained from satellite data (***Continue study from previous year*** started in 2012-13)	Pankaj Mani Rakesh Kumar	1 year (2014-2015)	NIH
3.	Preparation of Groundwater Quality Atlas using GIS for Varanasi City situated on the bank of River Ganga	SR Kumar and MS Rao	2 year (2014-2016)	NIH
4.	Study of drought in Bihar districts	SR Kumar and DS Rathore	2 year (2014-2016)	NIH
5.	Spatial and Temporal Distribution of Geochemical Characteristics and Environmental Stable Isotopes in Groundwater of North Bengal using GIS and its Assessment with the help of Water Quality Index (WQI) and Existing Classification Systems (***Continue study from previous year***)	SR Kumar and MS Rao	2nd year (2014-2015): **Part-II:** Environmental Stable Isotopes, WQI, Classification Systems and Trends in Water Quality Parameters	NIH

6.	Time Series analysis of Monthly Rainfall in Mahi Basin	NG Pandey B Chakravorty SR Kumar	2 year (2014-2016)	NIH
7.	Monthly Rainfall Prediction of Bihar Districts	SR Kumar, RV Raman, NG Pandey, B Chakravorty	2 year (2014-2016)	NIH
8.	Development of Relationships Between Reference Evapotranspiration of Penman-Monteith and other Climatological methods for Bihar under Middle Ganga Basin	SR Kumar NG Pandey B Chakravorty RV Raman	3 year (2014-2017)	NIH

*To be considered by the RCC